## **EAST Search History**

## **EAST Search History (Prior Art)**

| Ref# | Hits | Search Query   | DBs   | Default<br>Operator | Plurals | Time Stamp          |
|------|------|--|---|---------------------|---------|---------------------|
| \$85 | 1    | passiv\$5 with (magnet\$2 or<br>magnet\$4resist\$4) with<br>memory (passiv\$5 with (??<br>adj nm)) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| S84  | 1    | passiv\$5 with magnet\$4resist<br>\$4 with memory (passiv\$5<br>with (?? adj nm))                  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| \$83 | 1    | passiv\$5 with magnet\$4resist<br>\$4 with memory (passiv\$5<br>with \$2nm)                        | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| S82  | 0    | passiv\$5 with magnet\$4resist<br>\$4 with memory (passiv\$5<br>with ??nm)                         | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| S81  | 0    | passiv\$5 with magnet\$2 with<br>memory (passiv\$5 with ??<br>nm)                                  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| S80  | 0    | passiv\$5 with magnetic with<br>memory (passiv\$5 with ??<br>nm)                                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND                 | ON      | 2009/11/13<br>13:48 |
| S79  | 2    | ("7029924").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR                  | OFF     | 2009/11/13<br>13:48 |

| S78 | 61 | (passiv\$5 or (diamond or DLC or carbon)) ((wiring or conduct\$2 or ((write or bit or word) adj (line or conduct \$2))) with ??nm)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
|-----|----|---|---|-------------|-----|---------------------|
| S77 | 18 | (("6653665") or ("6617658") or ("6632723") or ("6807086") or ("6760250") or ("6861752") or ("6927468") or ("7148550") or ("6764865") or ("6947314") or ("6909130") or ("7141842") or ("7061032") or ("7135735") or ("7262449") or ("6984865") or ("6822896")).PN. | US-PGPUB;<br>USPAT; USOCR   | OR          | OFF | 2009/11/13<br>13:48 |
| S76 | 9  | mram same overlayer   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S75 | 0  | mram with overlayer   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S74 | 6  | ("6211090"   "6548849"  <br>"6556473"   "6797536").PN.<br>OR ("7041603").URPN.  | US-PGPUB;<br>USPAT; USOCR   | <b>an</b> d | ON  | 2009/11/13<br>13:48 |
| S73 | 24 | ((amorphous adj carbon adj<br>film) or (diamond adj like adj<br>carbon)) same ((bit or word<br>or write) adj2 (conductor or<br>electrode or line))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S72 | 6  | (amorphous adj carbon adj<br>film) with ((bit or word or<br>write) adj2 (conductor or<br>electrode or line))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S71 | 34 | (("diamond-like" or (diamond<br>adj like) adj carbon) or DLC)<br>with ((bit or word or write)<br>adj2 (conductor or electrode<br>or line))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |

| S70 | 19  | ((passiv\$5 or shield\$3 or cap<br>\$4) with (("diamond-like" or<br>(diamond adj like) adj<br>carbon) or DLC)) ((bit or<br>word or write) adj2<br>(conductor or electrode or<br>line)) with (passiv\$5 or shield<br>\$3 or cap\$4) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
|-----|-----|--|---|-----|-----|---------------------|
| S69 | 128 | ((passiv\$5 or shield\$3 or cap<br>\$4) with (("diamond-like" or<br>(diamond adj like) adj<br>carbon) or DLC)) ((bit or<br>word or write) adj2<br>(conductor or electrode or<br>line))   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S68 | 0   | ((passiv\$5 or shield\$3 or cap<br>\$4) with (("diamond-like" or<br>(diamond adj like) adj<br>carbon) or DLC)) same ((bit<br>or word or write) adj2<br>(conductor or electrode or<br>line))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S67 | 62  | ("4791604"   "5541868"  <br>"5640343"   "5695864"  <br>"5734605"   "6069820"  <br>"6072382"   "6130835").PN.<br>OR ("6331944").URPN.   | US-PGPUB;<br>USPAT; USOCR   | AND | ON  | 2009/11/13<br>13:48 |
| S66 | 8   | mram same (("diamond-like"<br>or (diamond adj like) adj<br>carbon) or DLC)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S65 | 23  | ("5496759"   "5569617"  <br>"5587943"   "5756366"  <br>"5982658"   "6028786"  <br>"6136705"   "6153443"  <br>"6338899"   "6379978"  <br>"6391658").PN. OR<br>("6627913").URPN.   | US-PGPUB;<br>USPAT; USOCR   | AND | ON  | 2009/11/13<br>13:48 |
| S64 | 2   | ("20070194367").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/13<br>13:48 |
| S63 | 9   | mram (passiv\$5 with (diamond or DLC or carbon))   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S62 | 5   | ("5902690"   "6165607"  <br>"6219212").PN. OR<br>("6724027").URPN.   | US-PGPUB;<br>USPAT; USOCR   | AND | ON  | 2009/11/13<br>13:48 |

| S61  | 4  | ("5902690"   "6211090"  <br>"6288929").PN. OR<br>("6977401").URPN. | US-PGPUB;<br>USPAT; USOCR   | <b>AN</b> D | ON  | 2009/11/13<br>13:48 |
|------|----|--|---|-------------|-----|---------------------|
| \$60 | 2  | ("6977401").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/13<br>13:48 |
| S59  | 56 | ("5902690").URPN.  | USPAT   | AND         | ON  | 2009/11/13<br>13:48 |
| S58  | 2  | ("5902690").P <b>N</b> .   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/13<br>13:48 |
| S57  | 2  | ("5835314").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/13<br>13:48 |
| S56  | 2  | ("7029924").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/13<br>13:48 |
| S55  | 49 | copy\$3 with magnetic with proximity                               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| \$54 | 0  | copy\$3 with magnetic with proximity with memory                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S53  | 64 | (S49 or S50) S51   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |
| S52  | 7  | (S49 or S50) (passiv\$5 with (diamond or DLC or carbon))           | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/13<br>13:48 |

| S51 | 5459 | ((257/421,427) or<br>(365/158,171,173)).CCLS.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/13<br>13:48 |
|-----|------|--|---|-----|-----|---------------------|
| S50 | 268  | passiv\$5 with magnetic with memory  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S49 | 217  | passiv\$5 with mram  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S48 | 1    | 10/678254  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>13:48 |
| S87 | 5    | (protect\$3 or coat\$3 or<br>passivat\$3) near3 (coat\$3 or<br>layer) same (magnetoresist<br>\$4 near2 memory) same<br>thickness                 | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>14:08 |
| S86 | 520  | (protect\$3 or coat\$3 or<br>passivat\$3) near3 (coat\$3 or<br>layer) same magnetoresist\$4<br>same thickness                                    | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>14:08 |
| S88 | 6    | (protect\$3 or coat\$3 or<br>passivat\$3) near3 (coat\$3 or<br>layer) same (magnetoresist<br>\$4 near2 memory) same<br>(thickness or dimensions) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>15:29 |
| S89 | 4    | ("6211090"   "6548849"  <br>"6556473"   "6797536").PN.   | US-PGPUB;<br>USPAT; USOCR   | and | ON  | 2009/11/13<br>16:03 |
| S90 | 361  | (protect\$3 or coat\$3 or<br>passivat\$3) near3 (coat\$3 or<br>layer) same magnetoresist\$4<br>same thickness (" nm" or " .<br>mu.m")            | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>16:04 |

| S92  | 152  | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer) with (" nm" or " .mu. m")) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m")                                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>16:05 |
|------|------|---|---|-----|-----|---------------------|
| S91  | 950  | (protect\$3 or coat\$3 or<br>passivat\$3) near3 (coat\$3 or<br>layer) same ((magnetoresist<br>\$4 with memory) or mram or<br>mtj or tmr or gmr or cmr) ("<br>nm" or " .mu.m")   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>16:05 |
| S93  | 22   | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer) with ("nm" or ".mu.m")) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) ("nm" or ".mu.m") (dlc or (diamond adj like adj carbon)) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>16:13 |
| S95  | 29   | S92 S94   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/13<br>16:24 |
| S94  | 5298 | ((257/421) or<br>(365/158,171,173)).CCLS.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/13<br>16:24 |
| S96  | 1    | (10/255847).APP.  | USPAT; USOCR  | and | ON  | 2009/11/13<br>16:26 |
| S97  | 2    | ("7473951").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/14<br>12:05 |
| S100 | 88   | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer) with (" nm" or " .mu. m" or " .ang.")) same (((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) with (" nm" or " .mu.m" or " .ang."))    | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>12:07 |

| <b>S</b> 99 | 152 | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer) with (" nm" or " .mu. m" or " .ang.")) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.")  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>12:07 |
|-------------|-----|--|---|-----|-----|---------------------|
| 598         | 22  | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer) with (" nm" or " .mu. m" or " .ang.")) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.") (dlc or (diamond adj like adj carbon)) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>12:07 |
| S101        | 2   | ("7394122").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/14<br>12:34 |
| S102        | 62  | ((protect\$3 or coat\$3 or passivat\$3) near3 (coat\$3 or layer)) with ((write or bit) adj line) ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.")  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>13:37 |
| S104        | 90  | ((protect\$3 or coat\$3 or passiv\$5) near3 (coat\$3 or layer)) with ((word or write or bit) adj line) ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.")  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>13:53 |
| S103        | 34  | ((protect\$3 or coat\$3 or passiv\$5) near3 (coat\$3 or layer)) with ((word or write or bit) adj line) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.")   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>13:53 |
| S106        | 115 | ((protect\$3 or coat\$3 or passiv\$5)) with ((word or write or bit) adj line) same ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.")  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/14<br>13:54 |

| S105 | 228   | ((protect\$3 or coat\$3 or passiv\$5)) with ((word or write or bit) adj line) ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr) (" nm" or " .mu.m" or " .ang.") | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/14<br>13:54 |
|------|-------|--|---|-------------|-----|---------------------|
| S108 | 10    | ("20010021089"  <br>"20020003684"  <br>"20020050632"  <br>"20030099069"   "5880910"<br>  "5902690"   "6648990"  <br>"6717845"   "6943993").PN.<br>OR ("7336556").URPN.             | US-PGPUB;<br>USPAT; USOCR   | AND         | ON  | 2009/11/14<br>13:56 |
| S107 | 1     | (10/519895).APP.   | USPAT; USOCR  | AND         | ON  | 2009/11/14<br>13:56 |
| S110 | 56    | ("5902690").URPN.  | USPAT   | <b>AN</b> D | ON  | 2009/11/14<br>13:58 |
| S109 | 2     | ("5902690").PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/14<br>13:58 |
| S111 | 1     | (10/235810).APP.   | USPAT; USOCR  | AND         | ON  | 2009/11/14<br>14:13 |
| S114 | 1     | S112 S113  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/14<br>14:19 |
| S113 | 382   | ((protect\$3 or coat\$3 or passiv\$5)) with ((word or write or bit) adj line) ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr)                                 | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/14<br>14:19 |
| S112 | 10513 | ((protect\$3 or coat\$3 or<br>passiv\$5)) with (DLC or<br>diamond\$1like\$1carbon or<br>(diamond adj like adj<br>carbon))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/14<br>14:19 |
| S117 | 261   | S112 S116  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/14<br>14:20 |

| S126 | 1      | (10/669481). <b>A</b> PP.  | USPAT; USOCR  | AND | ON | 2009/11/20<br>16:17 |
|------|--------|--|---|-----|----|---------------------|
| S127 | 27     | ("20020034117"   "20020080643"   "20020127743"   "20020176272"   "20040174728"   "5659499"   "5940319"   "6153443"   "6211090"   "6335890"   "6678187").PN. OR ("6940749").URPN. | US-PGPUB;<br>USPAT; USOCR   | AND | ON | 2009/11/20<br>16:17 |
| S125 | 0      | (10/603351).APP.   | USPAT; USOCR  | AND | ON | 2009/11/20<br>16:15 |
| S124 | 33     | mram with (thin\$4 near3 (line or conductor))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>16:13 |
| S123 | 9      | mram (passiv\$5 with (diamond or DLC or carbon))   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>11:39 |
| S120 | 79     | S112 S116 ((cross adj point)<br>or matrix or array)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/14<br>14:26 |
| S118 | 176958 | (protect\$3 or coat\$3 or passivat\$3) with (" nm" or " . mu.m" or " .ang.")   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/14<br>14:21 |
| S119 | 91     | S117 S118  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/14<br>14:21 |
| S115 | 687    | ((protect\$3 or coat\$3 or passiv\$5)) same ((word or write or bit) adj line) ((magnetoresist\$4 with memory) or mram or mtj or tmr or gmr or cmr)                               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/14<br>14:20 |
| S116 | 12319  | ((protect\$3 or coat\$3 or<br>passiv\$5)) same (((word or<br>write or bit) adj line) or<br>((magnetoresist\$4 with<br>memory) or mram or mtj or<br>tmr or gmr or cmr))           | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/14<br>14:20 |

| S128 | 130 | ("5329486"   "5640343"  <br>"5768181").PN. OR<br>("5940319").URPN.  | US-PGPUB;<br>USPAT; USOCR   | AND         | ON  | 2009/11/20<br>16:20 |
|------|-----|---|---|-------------|-----|---------------------|
| S129 | 2   | ("5940319"   "6548849").PN.   | US-PGPUB;<br>USPAT; USOCR   | AND         | ON  | 2009/11/20<br>16:31 |
| S130 | 8   | mram same ((diamond adj<br>like adj carbon) or DLC)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/20<br>16:35 |
| S131 | 183 | mram ((diamond adj like adj<br>carbon) or DLC)  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/20<br>16:36 |
| S132 | 3   | ("7211849").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/20<br>16:57 |
| S133 | 2   | ("6783995").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR          | OFF | 2009/11/20<br>16:58 |
| S134 | 74  | ("5804458"   "5940319"  <br>"6048739").PN. OR<br>("6165803").URPN.  | US-PGPUB;<br>USPAT; USOCR   | <b>AN</b> D | ON  | 2009/11/20<br>17:02 |
| S136 | 97  | (upper adj2 (line or<br>conductor)) same (lower<br>adj2 (line or conductor))<br>same (thinner or thicker)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/20<br>21:38 |
| S135 | 45  | (upper adj2 (line or<br>conductor)) same (lower<br>adj2 (line or conductor))<br>same thinner  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/20<br>21:38 |
| S138 | 0   | (upper adj2 (line or conductor)) same (lower adj2 (line or conductor)) same (thinner or thicker) (mram or mtj or tmr or gmr or cmr or magneto\$1resist \$4) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND         | ON  | 2009/11/20<br>21:39 |

| S137  | 0   | (upper adj2 (line or<br>conductor)) same (lower<br>adj2 (line or conductor))<br>same (thinner or thicker)<br>(mram or mtj or tmr or gmr<br>or cmr)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>21:39 |
|-------|-----|--|---|-----|----|---------------------|
| S140  | 134 | ((word or upper or bit or write) adj2 (line or conductor)) same ((word or lower or bit or write) adj2 (line or conductor)) with (thinner or thicker) (mram or mtj or tmr or gmr or cmr or magneto\$1resist\$4)                                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>21:40 |
| S139  | 282 | ((word or upper or bit or write) adj2 (line or conductor)) same ((word or lower or bit or write) adj2 (line or conductor)) same (thinner or thicker) (mram or mtj or tmr or gmr or cmr or magneto\$1resist\$4)                                   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>21:40 |
| \$141 | 69  | ((word or upper or bit or write) adj2 (line or conductor)) same ((word or lower or bit or write) adj2 (line or conductor)) with (thinner or thicker) (mram or mtj or tmr or gmr or cmr or magneto\$1resist\$4) @ad<"20031006"                    | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON | 2009/11/20<br>21:41 |
| \$143 | 22  | ("3350180"   "3375091"   "3582912"   "5408377"   "5703805"   "5745408"   "5841692"   "5953248"   "5959880"   "5966012"   "5966323"   "6114719"   "6153320"   "6166948"   "6172904"   "6205053"   "6633498"   "6711052").PN. OR ("6873542").URPN. | US-PGPUB;<br>USPAT; USOCR   | AND | ON | 2009/11/20<br>21:51 |
| S142  | 1   | (10/263495).APP.   | USPAT; USOCR  | AND | ON | 2009/11/20<br>21:51 |
| S144  | 14  | ("20040120185"   "20040195602"   "20050102720"   "20050152180"   "20050214953"   "6365419"   "6473328"   "6545900"   "6682943"   "6778430"   "6815785"   "6873542"   "6940749").PN. OR ("7071009").URPN.   | US-PGPUB;<br>USPAT; USOCR   | AND | ON | 2009/11/20<br>21:58 |
| S145  | 1   | (09/961326).APP.   | USPAT; USOCR  | AND | ON | 2009/11/20<br>22:15 |

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|---|-------|---|---|-----|-----|---|
| S147                                    | 9     | ("20010035545"   "5883828"<br>  "5894447"   "5936882"  <br>"6048739"   "6072718"  <br>"6169688"   "6278631"  <br>"6365419").PN.                           | US-PGPUB;<br>USPAT; USOCR   | AND | ON  | 2009/11/23<br>08:06                     |
| S146                                    | 2     | ("6670660").PN.   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2009/11/23<br>08:06                     |
| S150                                    | 32    | (mtj or mram) ((" nm" or " .<br>mu.m" or " .ang.") near2<br>((writ\$3 or read\$3 or bit or<br>word) adj (line or conductor<br>or wir\$3))) @ad<"20031006" | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/23<br>08:15                     |
| S149                                    | 100   | (mtj or mram) ((" nm" or " .<br>mu.m" or " .ang.") near2<br>((writ\$3 or read\$3 or bit or<br>word) adj (line or conductor<br>or wir\$3)))                | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/23<br>08:15                     |
| S148                                    | 445   | (mtj or mram) ((" nm" or " .<br>mu.m" or " .ang.") with ((writ<br>\$3 or read\$3 or bit or word)<br>adj (line or conductor or wir<br>\$3)))               | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/23<br>08:15                     |
| S151                                    | 60    | (mtj or mram) ((thickness)<br>near2((writ\$3 or read\$3 or<br>bit or word) adj (line or<br>conductor or wir\$3)))<br>@ad<"20031006"                       | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/23<br>08:41                     |
| S152                                    | 4     | (mtj or mram) ((differ\$3 near2 thickness) with ((writ \$3 or read\$3 or sens\$3 or bit or word) adj (line or conductor or wir\$3))) @ad<"20031006"       | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2009/11/23<br>09:02                     |
| S153                                    | 4     | 10/704,552  | US-PGPUB;<br>USPAT; USOCR   | AND | ON  | 2009/11/23<br>10:49                     |
| L1                                      | 72749 | (passivation adj (film or<br>layer))  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>11:40                     |
| L3                                      | 7     | (passivation adj (film or<br>layer)) with (DLC or diamond<br>or carbon) MRAM  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>11:52                     |

| <u>L</u> 2 | 1944 | (passivation adj (film or<br>layer)) with (DLC or diamond<br>or carbon)                              | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>11:52 |
|------------|------|--|---|-----|-----|---------------------|
| L4         | 13   | (passivation adj (film or<br>layer)) with (DLC or diamond<br>or carbon) (magnetic with<br>memory)    | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>11:53 |
| L5         | 17   | (passivation adj (film or<br>layer)) with (DLC or diamond<br>or carb\$3) (magnetic with<br>memory)   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>12:02 |
| L6         | 37   | (passivation adj (film or<br>layer)) with (DLC or diamond<br>or carb\$3) (resist\$4 near2<br>memory) | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>12:07 |
| L8         | 47   | (passivat\$3 adj (film or layer<br>or coating)) same ((magnetic<br>or resist\$4) adj memory)         | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>12:09 |
| L7         | 449  | (passivat\$3 adj (film or layer<br>or coating)) ((magnetic or<br>resist\$4) adj memory)              | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | AND | ON  | 2010/06/14<br>12:09 |
| L9         | 4    | (("5902690") or<br>("20020050632")).PN.  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR  | OFF | 2010/06/14<br>12:13 |

## **EAST Search History (Interference)**

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## 6/14/2010 12:26:37 PM

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